APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/724,843	12/01/2003	Vivek Bhanu	M1103.70230US00	2170

45840   7590   06/29/2007
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EXAMINER
LIU, LIN

ART UNIT	PAPER NUMBER
2145	

MAIL DATE	DELIVERY MODE
06/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/724,843</td><td>Applicant(s)
BHANU ET AL.</td><td></td></tr>
<tr><td>Examiner
Lin Liu</td><td>Art Unit
2145</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 December 2003</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>01 December 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>12/01/2003 and 02/22/2005</u>.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This office action is responsive to communications filed on 12/01/2003.

Claims 1-21 are pending and have been examined.

2.   The information disclosure statement (I.D.S) filed on 12/01/2003 and 02/22/2005

are considered.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   **Claims 19 and 20** are rejected under 35 U.S.C. 112, second paragraph, as

being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

For claims 19, the phrase "user-mode Bluetooth PAN service" is indefinite and

vague as what applicant refers to as.

For claims 20, the phrase "kernel-mode Bluetooth PAN service" is indefinite and

vague as what applicant refers to as.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6.   **Claims 7-17** are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

7.   Claims 7 and 14 recite a condition; "... if an attempt is made to connect to the

preferred remote Bluetooth device...", if this condition was not to occur, there would be

no real-world result impact. In order for a method claim to be statutory, it must result in a

useful, concrete and tangible result. Claims 8-13 are dependent claims of claim 7 and

claims 15-17 are dependent claims of claim 14, thus they are rejected under the same

reason.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

9.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

10.   **Claims 1-18 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable

over **Rune (publication no.: US 2003/0060222 A1)** in view of **Miklos et al.**

(publication no.: US 2003/0092386 A1).

With respect to **claim 1,** Rune teaches a system for discovering and connecting

to a preferred remote Bluetooth device by a local Bluetooth device, comprising:

an inquiry scan cache that is refreshed by an inquiry scan (Rune, page 2, paragraph 30, noted inquiry scan transceiver);

a page scan cache that is refreshed by way of an attempt to connect to the preferred remote Bluetooth device (Rune, page 3, paragraph 32, noted that the page scan transceiver 530 provides functions for page scan and connection establishment); and

a list of visible remote Bluetooth devices comprising entries in the inquiry scan cache (Rune, page 3, paragraph 34, noted the master and slave units), concatenated with each entry in the page scan cache that the local Bluetooth device successfully contacts by way of a periodic page scan performed more frequently than the periodic inquiry scan (Rune, page 3, paragraph 33, noted that after obtaining the information the Bluetooth roaming device may transmits to the page scan transceiver).

However, Rune does not explicitly teach a method of periodically performing an inquiry scan for the Bluetooth devices.

In the same field of endeavor, Miklos teaches a method of periodically performing inquiry scan for the Bluetooth devices (Miklos, page 2, paragraph 15, noted that the inquiry component scans every 2.56 sec or less).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of periodically performing inquiry scan as taught by Miklos in Rune's invention in order to efficiently and faster discover the neighbor connections of other Bluetooth devices (Miklos, page 2, paragraph 16).

With respect **claim 2,** Rune teaches the system of claim 1 wherein the preferred remote Bluetooth device provides a Network Access Point (NAP) service (Rune, page 3, paragraph 32).

With respect to **claim 3,** Rune teaches all the claimed limitations, except that he does not explicitly teach a method of providing a Group Ad-hoc Network (GN) service.

In the same field of endeavor, Miklos teaches a method of providing a Group Ad-hoc Network (GN) service (Miklos, page 2, paragraph 22).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method of providing a Group Ad-hoc Network (GN) service as taught by Miklos in Rune's invention in order to allow the peer-to-peer characteristics of the network and offer location-based services that address specific communities of users.

With respect to **claim 4,** Rune teaches the system of claim 1, further comprising an automatic configuration service component that polls for the list of visible remote Bluetooth devices (Rune, page 3, paragraph 37, noted polling the slave unit).

With respect to **claim 5,** Rune teaches the system of claim 1 wherein the page scan cache holds a finite number of entries and is associated with an expiration policy (Rune, page 3, paragraph 37).

With respect to **claim 6,** Rune teaches the system of claim 1 wherein the inquiry scan cache is updated by way of an attempt by a remote Bluetooth device to connect to the local Bluetooth device (Rune, page 2, paragraph 31 and page 3, paragraph 37).

Consider **claims 7 and 8,** the limitations of these claims are substantially the same as those in claim 1, but rather in method claims. Therefore the same rationale for rejecting claim 1 is used to reject claims 7 and 8. By this rationale **claims 7 and 8** are rejected.

With respect to **claim 9,** Rune teaches the method of claim 7 wherein the page scan cache holds a finite number of entries, the method further comprising, for each entry added to the page scan cache:

setting an expiration time for the entry (Rune, page 3, paragraph 37);

if the periodic inquiry scan does not reveal the entry, reducing the expiration time (Rune, page 1, paragraph 11); and

if the expiration time has occurred, removing the entry from the page scan cache (Rune, page 1, paragraph 11).

With respect to **claim 10,** Rune teaches the method of claim 7, further comprising:

if a remote Bluetooth device attempts to connect to the local Bluetooth device, adding an entry for the remote Bluetooth device to the inquiry scan cache (Rune, page 3, paragraph 33, noted that after obtaining the information the Bluetooth roaming device may transmits to the page scan transceiver).

Consider **claim 11** the limitations of this claim are substantially the same as those in claim 2. Therefore the same rationale for rejecting claim 2 is used to reject claim 11. By this rationale **claim 11** is rejected.

Consider **claim 12** the limitations of this claim are substantially the same as those in claim 3. Therefore the same rationale for rejecting claim 3 is used to reject claim 12. By this rationale **claim 12** is rejected.

With respect to **claim 13,** Rune teaches the method of claim 7 wherein forming a list of visible remote Bluetooth devices is in response to polling by an automatic configuration service (Rune page 3, paragraph 37, polling the slave unit).

Consider **claims 14 and 15,** the limitations of these claims are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claims 14 and 15. By this rationale **claims 14 and 15** are rejected.

Consider **claim 16** the limitations of this claim are substantially the same as those in claim 9. Therefore the same rationale for rejecting claim 9 is used to reject claim 16. By this rationale **claim 16** is rejected.

Consider **claim 17** the limitations of this claim are substantially the same as those in claim 10. Therefore the same rationale for rejecting claim 10 is used to reject claim 17. By this rationale **claim 17** is rejected.

Consider **claim 18** the limitations of this claim are substantially the same as those in claim 1, but rather in a computer-readable medium form. Therefore the same rationale for rejecting claim 1 is used to reject claim 18. By this rationale **claim 18** is rejected.

Consider **claim 21** the limitations of this claim are substantially the same as those in claim 4. Therefore the same rationale for rejecting claim 4 is used to reject claim 21. By this rationale **claim 21** is rejected.

11.   Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rune (publication no.: US 2003/0060222 A1)** in view of **Miklos et al. (publication no.: US 2003/0092386 A1)** and further in view of **Choi (patent no.: US 6,879,570 B1).**

With respect to **claim 19**, the combined method of Rune and Miklos teaches all the claimed limitations, except that they do not explicitly teach a method of providing a user-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a user-mode Bluetooth PAN service component (Choi, col. 3, lines 25-42).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method providing a user-mode Bluetooth PAN service component as taught by Choi in the combined method of Rune and Miklos invention in order to check whether other Bluetooth devices are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-63).

With respect to **claim 20**, the combined method of Rune and Miklos teaches all the claimed limitations, except that they do not explicitly teach a method of providing a kernel-mode Bluetooth PAN service component.

In the same field of endeavor, Choi teaches a method of providing a kernel-mode Bluetooth PAN service component (Choi, col. 3, lines 43-65).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate the method providing a kernel-mode Bluetooth PAN service component as taught by Choi in the combined method of Rune and Miklos invention in order to check whether other Bluetooth devices are present in the communicable range of the Bluetooth device (Choi, col. 1, lines 49-63).

Conclusion

12.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Sasai et al. (Publication no.: US 2004/0247023 A1) discloses a communication method using Bluetooth device.

- Lipasti et al. (publication no.: US 2006/0089119 A1) discloses a method for scatternet formation in ad-hoc networks.

- Anjum et al. (publication no.: US 2003/0099212 A1) discloses an efficient piconet formation and maintenance in a Bluetooth wireless network.

13.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lin Liu whose telephone number is (571) 270-1447. The examiner can normally be reached on Monday - Friday, 7:30am - 5:00pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.Liu
06/22/2007

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SUPERVISORY PATENT EXAMINER